Primary Leiomyosarcoma of the Inferior Vena Cava: Reports of Infrarenal and Suprahepatic Caval Involvement

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Objectives: We report two cases of primary inferior vena cava (IVC) leiomyosarcoma resection, one confined to the infrarenal IVC and the other extending to the suprahepatic IVC.

Methods: Both patients were females in their late 50s who presented with abdominal pain and malaise and without evidence of metastases. The first patient was initially diagnosed with a retroperitoneal sarcoma of unknown origin. Vascular surgery was consulted intra-operatively when it became evident that the infrarenal IVC was primarily involved. The tumor in the second patient involved not only the infrarenal IVC but extended cephalad to the suprahepatic IVC. A review of this rare tumor and intraoperative photos detailing the operative strategies will be presented.

Results: The first patient required proximal clamping of the IVC immediately below the renal veins. In the second patient, intrapericardial IVC clamping was required along with clamping of the portal triad and reimplantation of the right renal vein into the graft. After tumor and IVC excision, both patients underwent concomitant interposition polytetrafluoroethylene (PTFE) graft replacement.

Conclusions: Primary tumors of the inferior vena cava (IVC) are rare, with leiomyosarcoma (LMS) representing the vast majority (95%). Greater than 50% of all vascular LMSs occur in the IVC. Prognosis is often poor due to advanced stage at diagnosis owing to a slow growth pattern. There is no proven role for adjuvant treatment and recurrence is common. Surgical excision of the tumor and affected IVC is the only treatment shown to improve survival. Reconstruction of the IVC and other involved vessels is often required.

Mid-abdominal Coarctation Exacerbated by Pre-eclampsia: A Case Report of Thoracoabdominal Reconstruction in a Woman who Suffered Hypertension Induced Premature Childbirth

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Objectives: This is a case report of a 23-year-old woman diagnosed with coarctation of the mid-abdominal aorta. She was on three anti-hypertensive medications with poorly controlled hypertension (HTN) when she developed pre-eclampsia, resulting in the premature birth of her 28-week-old baby. After childbirth, she continued to have uncontrolled HTN, symptoms of mesenteric ischemia and lower extremity claudication. A computed tomography (CT) angiogram showed approximately 50% focal narrowing of the aorta at the origin of the renal arteries, extending distally approximately 4 cm in length, near occlusion at the origin of the celiac artery with multiple collateral vessels including a patent arc of Buehler, severe stenosis of the superior mesenteric artery (SMA), and bilateral focal stenosis of the renal ostium.

Methods: She underwent thoracoabdominal aortic repair with 14 mm Dacron end-to-side tube graft placement extending from the descending thoracic to the infrarenal aorta. A 12 mm x 7 mm bifurcated graft was used to complete the aorto-common hepatic artery and aorto-SMA bypasses. A third graft limb was sewn from the aortic graft to revascularize the left renal artery.

Results: Postoperatively, blood pressure was stringently monitored with goal pressures of <140/90. On postoperative day 10, she was discharged home with stable renal function and acceptable blood pressures. At one year follow up, her hypertension has completely resolved with systolic ranges from 120 s to 140 s and she has stopped taking her blood pressure medications. Her mesenteric ischemic and claudication symptoms have also resolved. Follow up CT angiogram at one year confirms patency of the aorto-aorto graft, aorto-hepatic, aorto-SMA, and aorto-left renal bypasses.

Conclusions: This is an interesting patient with mid-abdominal coarctation syndrome whose clinical severity exacerbated with the presence of pre-eclampsia. Subsequent thoracoabdominal reconstruction appears to have been an excellent option for her.

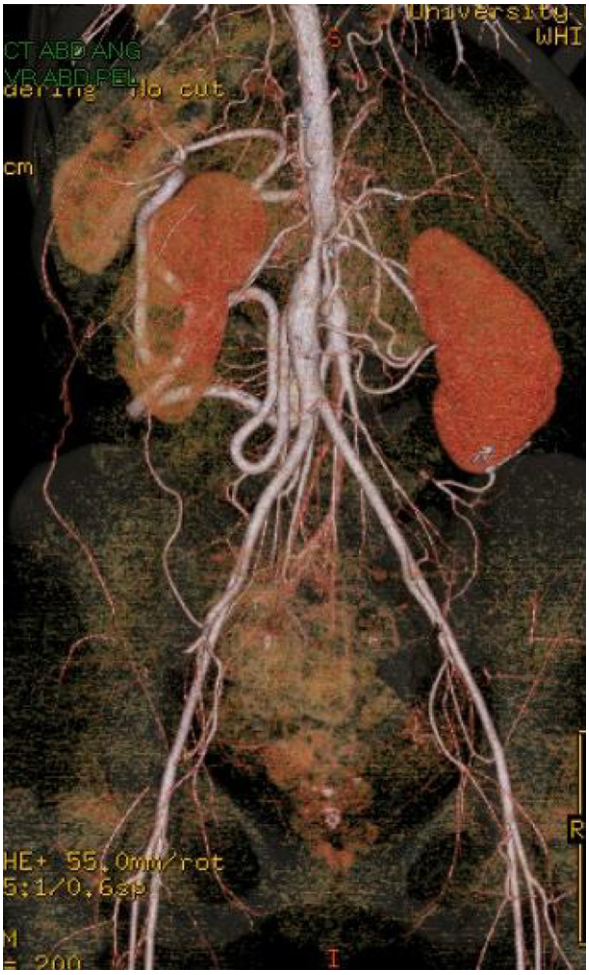

Fig. CT arteriogram demonstrating coarctation of the abdominal aorta.